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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/830,434 04/26/01 KOBAYASHI

M 109352 *MR*

EXAMINER

QM32/1107

OLIFF & BERRIDGE
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ALEXANDRIA VA 22320

SHAKERI, H	
ART UNIT	PAPER NUMBER

3723

4

DATE MAILED:

11/07/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<p align="center">Office Action Summary</p>	<p>Application No.</p> <p>09/830,434</p>	<p>Applicant(s)</p> <p>KOBAYASHI ET AL.</p>	
	<p>Examiner</p> <p>Hadi Shakeri</p>	<p>Art Unit</p> <p>3723</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 15, 17-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. ✓ Regarding claim 15, "according to claims" line 1, renders the claim indefinite.
4. ✓ Claim 17 recites the limitation "the surface layer" in line 2. There is insufficient antecedent basis for this limitation in the claim. Same correction should be made regarding claims 18-26.
5. ✓ Claim 31 recites the limitation "the finish polishing" in line 1. There is insufficient antecedent basis for this limitation in the claim.
6. ✓ Claim 31 recites the limitation "the position" in line 2. There is insufficient antecedent basis for this limitation in the claim.
7. Claim 31 recites the limitation "the polishing pad" in line 3. There is insufficient antecedent basis for this limitation in the claim.
8. ✓ Claims 20 and 21 are identical with claims 17 and 16 respectively.
9. ✓ Claim 19 is indefinite, because it claims a content of zinc in a surface layer of less than 100ppm but it depends from claim 13, which recites a polishing pad not including zinc compounds.

10. Claims 27-30 are vague and indefinite because it is unclear whether the claims are dependent claims or independent claims. The language as written fails to establish the scope of the claims. If the claims are dependent, i.e., "a polishing pad", they fail to further limit the parent claim. If the claims are independent, the language as written renders the scope of the claim unascertainable, (limitations not actually disclosed, i.e., those encompassed by the "a pad according to claim...").

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

12. Claims 1-30 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Roberts et al., US Patent No. 6,217,434.

Roberts et al. disclose polishing pads and methods relating thereto in which improved polishing pads with advantageous hydrophilic polishing material and innovative surface topography and texture are described. It describes the component and properties of the polishing pad and catalyst used in decreasing the polymerization reaction time and teaches that a preferred catalyst is "devoid" of transition metals,

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particularly zinc...(col. 6, line 9). In the alternative, it teaches that it is preferred that zinc is avoided in the polishing pad, therefore It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to produce a polishing pad in which a content of zinc is minimized or avoided, in view of Roberts et al. for improved polishing performance.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts et al. in view of Applicant's Admitted Prior Art.

Roberts et al. as applied above meets all the limitations of claim 31, i.e., a polishing pad that is devoid of zinc and a polishing method of polishing a semiconductor wafer using the pad, except for indicating a concentration of zinc compounds less or equal than 200ppm in a finish polishing. Applicant admits on page 32, lines 21-23 that in a finish polishing step commonly performed at present only a polishing pad has zinc compounds, therefore a finish polishing utilizing the polishing pad of Roberts et al. would meet the limitations.

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Conclusion

15. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Hadi Shakeri at (703) 308-6279, FAX (703) 746-3279 for unofficial documents. The examiner can normally be reached on Monday-Thursday, 7:30 AM to 6:00 PM.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist at (703) 308-1148.



Joseph J. Hail, III
Supervisory Patent Examiner
Technology Center 3700



November 2, 2001